

# REPORT DOCUMENTATION PAGE

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36 Separate items are enclosed

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MEMORANDUM FOR PRS (Contractor Publication)

FROM: PROI (STINFO)

20 October 2000

SUBJECT: Authorization for Release of Technical Information, Control Number: **AFRL-PR-ED-AB-2000-225**  
Miller, Tim, "An Experimental Investigation of Cracking Along a Liner-Propellant Interface"

**JANNAF 34<sup>th</sup> Structures & Mechanical Behavior Subcommittee Meeting**  
**(Cocoa Beach, FL, 20-26 Mar 2001) (Deadline: 03 Nov 2000)**

**(Statement A)**

1. This request has been reviewed by the Foreign Disclosure Office for: a.) appropriateness of distribution statement, b.) military/national critical technology, c.) export controls or distribution restrictions, d.) appropriateness for release to a foreign nation, and e.) technical sensitivity and/or economic sensitivity.

Comments: \_\_\_\_\_  
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Signature \_\_\_\_\_ Date \_\_\_\_\_

2. This request has been reviewed by the Public Affairs Office for: a.) appropriateness for public release and/or b) possible higher headquarters review

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Signature \_\_\_\_\_ Date \_\_\_\_\_

3. This request has been reviewed by the STINFO for: a.) changes if approved as amended, b.) appropriateness of distribution statement, c.) military/national critical technology, d.) economic sensitivity, e.) parallel review completed if required, and f.) format and completion of meeting clearance form if required

Comments: \_\_\_\_\_  
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4. This request has been reviewed by PRS for: a.) technical accuracy, b.) appropriateness for audience, c.) appropriateness of distribution statement, d.) technical sensitivity and economic sensitivity, e.) military/national critical technology, and f.) data rights and patentability

Comments: \_\_\_\_\_  
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APPROVED / APPROVED AS AMENDED / DISAPPROVED

PHILIP A. KESSEL

Date

Technical Advisor

Missile & Space Propulsion Division

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12<sup>th</sup> Nondestructive Evaluation Subcommittee (NDES)  
21<sup>st</sup> Rocket Nozzle Technology Subcommittee (RNTS)  
34<sup>th</sup> Structures & Mechanical Behavior Subcommittee (S&MBS)  
Joint Meeting  
26-20 March 2001  
Doubletree Oceanfront Hotel, Cocoa Beach, Florida

ABSTRACT

Title of Paper: An Experimental Investigation of Cracking along a Liner-Propellant Interface

Author(s): Timothy C. Miller

Is this paper an update? , Yes , No.

Has it been presented elsewhere? , Yes , No.

The fracture of a liner-propellant interface is studied experimentally using a tensile testing apparatus and videotape equipment. Additional experimental methods are used to supplement the conclusions derived from this testing, and computational modeling of the specimens is also performed. The fracture of the bimaterial is governed by the mode mixity and the properties of the constituents, and may involve crack growth along the interface or branching of the crack away from the interface, depending on the specific conditions.

Liner or